Recent Experimental Findings supporting Smarandache's Hypothesis and Quantum Sorites Paradoxes and SubQuantum Kinetic Model of Electron

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Abstract

Statement of the Problem: Smarandache Hypothesis states that there is no speed limit of anything, including light and particles. While the idea is quite simple and based on known hypothesis of quantum mechanics, called Einstein-Podolski-Rosen paradox, in reality such a superluminal physics seems still hard to accept by majority of physicists. Here we review some experiments to support superluminal physics and also findings to explain Smarandache Quantum Paradoxes and Quantum Sorites Paradox. We also touch briefly on new experiment on magneton, supporting SubQuantum Kinetic Model of Electron.

Conclusion & Significance: Multiexperimental findings assessment allows one to verify conjectures by two of us (FS & RNB), namely: Smarandache Hypothesis, Smarandache Quantum Sorites Paradoxes and SubQuantum Kinetic Model of Electron. Experimental results discussed here will likely open new directions of research toward evidence-based physics.

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Introduction

Smarandache Hypothesis states that there is no speed limit of anything, including light and particles [1]. Eric Weisstein also wrote implications of Smarandache Hypothesis: "(i.e., the speed of light c is not a maximum at which information can be transmitted) and that arbitrary speeds of information or mass transfer can occur. These assertions fly in the face of both theory and experiment, as they violate both Einstein's special theory of relativity and causality and lack any experimental support. It is true that modern experiments *have* demonstrated the existence of certain types of measurable superluminal phenomena. However, none of these experiments are in conflict with causality or special relativity, since no information or physical object actually travels at speeds $v > c$ to produce the observed phenomena." [1a]

While the idea is quite simple and based on known hypothesis of quantum mechanics, called Einstein-Podolski-Rosen paradox, in reality such a superluminal physics seems still hard to accept by majority of physicists. Here we review some experiments to support superluminal physics and also findings to explain Smarandache Quantum Paradoxes and Quantum Sorites Paradoxes [2][3]. We also touch briefly on new experiment on magneton, supporting SubQuantum Kinetic Model of Electron. That is the topic of this short communication.

Remark on OPERA's failure to detect superluminal neutrino

Since 2011, there was an apparent surprising result as announced by OPERA team. Nonetheless, few months later it was renounced, on the ground of errors in handling the measurement.

The story was retold by Lukasz Glinka as follows:

> "On September 22, 2011, the human world overloaded throughout the diverse paradigms and dogmas had experienced truly revolutionary excitations. Namely, on this day the OPERA

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> Collaboration, an international experimental project of the European Organization for Nuclear Research - CERN, announced that their results, which arose from the high-statistics experimental data, evidently demonstrate existence of the superluminal neutrinos, Cf. the Refs. [1,2]. During the subsequent five months, the public opinion was a witness of many various speculations about faster-then-light motion, but already on February 22, 2012, OPERA pointed out the two issues, based on the technology of the Global Positioning System whose construction in itself makes use of the arguments of Special Relativity, which could immediately impact on the measurement process, Cf. the Refs. [3,4]. The first problem was linked to the oscillator producing the events time-stamps in between the GPS synchronizations, whereas the second one was the cable of the optical fiber bringing the external GPS signal to the OPERA master clock. Both these possibilities potentially could give the anomaly regarded as an experimental error which led to registration of the faster-than-light neutrino. In February 2012, the second reason was considered more seriously than the first one, and the CERN experimentalists announced that the situation will be verified once again yet in 2012. In March 2012, the ICARUS experiment, another CERN experimental collaboration initiated in 1977 by Carlo Rubbia, who shared the 1984 Nobel Prize in Physics for discovery of the weak gauge bosons W and Z, confirmed the absolutism of the speed of light in the measurement of the neutrino motion. Already in June 2012, the CERN Research Director Sergio Bertolucci, at the 25th International Conference on Neutrino Physics and Astrophysics held in Kyoto, confirmed the mistaken measurement due to the OPERA Collaboration… Moreover, it is worth stressing that the superluminal state of affairs is well-known in modern astronomy since the early 1980s, when the faster-than-light motion had been suggested in order to contradict the quasars having the cosmological distances. In the present-day situation, the experimental data show that the superluminal travels are the phenomena which are very often met in radio galaxies, quasars and microquasars."[5]

Allow us to make few comments on such an apparent failure to detect faster than light speed as follows: Anyway we thought that a more convincing experiment has been done by Alain Aspect etc., showing quantum nonlocal interaction is real. In 1980 **Alain Aspect** performed the first EPR **experiment** (Einstein-Podolski-Rosen) which proved the existence of space nonlocality (**Aspect** 1982). Alain Aspect and his team at Orsay, Paris, conducted three Bell tests using calcium cascade sources. The first and last used the CH74 inequality. The second was the first application of the CHSH inequality. [10] The third (and most famous) was arranged such that the choice between the two settings on each side was made during the flight of the photons (as originally suggested by John Bell). Some experimenters have repeated this experiment and prove similar

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result until distance of more than 90 km. So the notion of *spooky action at a distance* is real effect.

Moreover, action at a distance is already in Newton's Principia. Einstein was trying to make all of Newton's expressions into nothings to be "superseded" by E's vastly inferior version of relativity.

That is part of how and why that belittling of Newton's faster than light "action at a distance" statement happened. At one point the mainstream thought that gravitation was limited to c velocity. One of us (RNB) objected to that idea, which resulted in Podkletnov's instrumented experiments which measured gravitation as being at least 2000 times c, where higher velocities could not be measured due to technical limitations of the instrumentation, which results imply an infinite velocity for gravitation. From that, he independently developed a model for gravitation almost identical to LaPlace's model. LaPlace's model for gravitation has been disparaged and destroyed during the past decade, by relativistic lies and irrelevant distractions being inserted into Laplace's original argument that the propagation velocity of gravitation must be at least 100,000,000 time c.

As we wrote before, Newton corrects Einstein, not the other way around. As such, the most common velocity in the Universe is infinite velocity.

Tesla agrees with us that infinitely remote activities directly influence physical systems, locally.

Resolution of Smarandache's Quantum Paradoxes and Quantum Sorites Paradoxes

In 2005 paper, one of us wrote (FS):

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"There can be generated many paradoxes or quasi-paradoxes that may occur from the combination of quantum and non-quantum worlds in physics. Even the passage from the micro-cosmos to the macro-cosmos, and reciprocally, can generate unsolved questions or counter-intuitive ideas. We define a quasi-paradox as a statement which has a prima facie self-contradictory support or an explicit contradiction, but which is not completely proven as a paradox."[2]

In a recent, forthcoming paper, RN Boyd discusses resolutions of some of those Smarandache Quantum Paradoxes and Quantum Sorites Paradoxes. The following passage is cited from RN Boyd's paper as follows: [3]

a. (Paradox 1a) Sorites Paradox
   Sorites Paradox (associated with Eubulides of Miletus (fourth century B.C.): Our visible world is composed of a totality of invisible particles. a) An invisible particle does not form a visible object, nor do two invisible particles, three invisible particles, etc. However, at some point, the collection of invisible particles becomes large enough to form a visible object, but there is apparently no definite point where this occurs.
   [R. N. Boyd]: The statement was true in the 4th century BC, but it is not true now. We can now measure the masses of a vast array of elemental particles. And we now know that there are such ratios as "moles" in chemistry telling us how many atoms are involved in the situation. So today we can make such determinations. There are fabrication processes in the manufacture of integrated circuits that are capable of actually arranging very precisely, each atom in the fabrication. One example of these techniques is the use of epitaxal deposition, which is a one atom thick deposition of material. Screening and masking techniques allow atom-by-atom structuring to occur. These circuits can be small enough so that Cooper pairing is impossible and quantum phase-slips occur in the energized circuit. However, the problem has now shifted into the domains which are smaller than our presentability to perceive with our instrumentations. Typically colliders are used to attempt to make measurements of the elemental particles, and recent data seems to be pointing strongly to a realm of particles even smaller than quarks, which may indeed comprise quarks, if such creatures exist in the first place. (What we are calling quarks may be something else

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entirely, perhaps organizations of yet smaller particles.) I hold that there is a vast array of entities smaller than the Planck length, and have developed methods for imaging such entities. I designed 6 methods for imaging SubQuantum particles (smaller than the Planck length). Valentini of Italy wrote a paper describing yet another way to accomplish SQ imaging. The easiest and cheapest to make SQ microscope of my design was publicized, and then tested for proof of principle by Dr. Bernd Binder of Germany. After a 2 years long effort, he verified proof of the principle of operation. The year after that, the design verified by Binder, was constructed at a university in Serbia. One of the Serbian professors sent me an email to inform me that the SQ microscope of my design has imaged entities as small as10×10−95 cm. The infinitely small is an unattainable goal in terms of technological approaches, but we know the infinitely small is there, by inferences.

b. (Paradox 1b) Sorites Paradox
   b) A similar paradox is developed in an opposite direction. It is always possible to remove a particle from an object in such a way that what is left is still a visible object. However, repeating and repeating this process, at some point, the visible object is decomposed so that the left part becomes invisible, but there is no definite point where this occurs.
   [R. N. Boyd]: There is, these days. But there may be a lower limit, which can be studied by quantum coherence of objects.

   [Paradox1b(continued)]: Generally, between and there is no clear distinction, no exact frontier. Where does really end and begin? One extends Zadeh's "fuzzy set" term to the "neutrosophic set" concept.
   [R. N. Boyd]: The boundary conditions are always very interesting. Those conditions which are both A and NOT A, yet neither A nor NOT A. Korzybski referred to these conditions as "NULL A". I call them boundary layers. They are a study in themselves, because boundary layers comprise a third state, and arise often. (Note: for more information on Alfred Korzybski's *Null A* which inspired fiction story by A/.E. Van Vogt, see ref [12][13]).

c. (Paradox 2) Uncertainty Paradox

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Large matter, which is under the 'determinist principle', is formed by a totality of elementary particles, which are under Heisenberg's 'indeterminacy principle'.
[R. N. Boyd]: Uncertainty does not apply to monochromatic coherent photons, nor indeed to any photonic system, by logical extension. [16][17]
Indeterminacy only applies where there are elements of chance involved, most particularly involving systems of particles, which are quite susceptible to Zitterbewegung, while photons remain largely unaffected by it. Hans Dehmelt of Germany was awarded the Nobel Prize in physics for keeping an electron pinned to one spot, so that its momentum and location could be known at the same time, for up to 3 months. [15] Heisenberg uncertainty failed in those circumstances. This experiment is considered by many as evidence that the uncertainty principle fails, except under very limited circumstances. It is easier to deal with this paradox when we consider that the uncertainty principle has failed, under many circumstance. A deterministic version of QM was developed based on experiential information factors, which imply an Intelligent Universe.

d. (Paradox 3) Unstable Paradox
Stable matter is formed by unstable elementary particles.
[R. N. Boyd]: The life time of the proton is calculated (not observed with instrumentation) to be on the order of 10×10^{32} years. But this ignores plasma/aether factors, and more importantly, gamma ray dissociations of atoms, which cause protons to vanish back into the aether from whence they originated. Gamma ray dissociation of atoms also causes SQparticles (vortex lines, Bhutatmas) propagating with an infinite velocity, which are the cause of gravitation and are the cause of the development of new electrons, positrons, protons, neutrons, and atoms due to aether/plasma events on the surfaces of stars. Instrumented measurements have discovered that every atomic element is found streaming out from the sun in the "solar wind". SAFIRE has instrumented physical evidence that hydrogen and many other elements are created in plasma double layers (charge separation layers) verified by SEM (scanning electron microscopy) and optical correlation spectroscopy. The creation and dis-creation of elementary particles and atoms is a continuous cycle which occurs at all times in the infinite volume universe. The life span of a proton is much smaller than the calculated standard. The actual life span of the proton is determined by the

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number of gamma ray dissociation events passing through the given volume, per unit time. (cf. G. Le Bon, see [14]).

The aforementioned paradoxes are just a few examples of Quantum Paradoxes and Quantum Sorites Paradoxes. We only mention a few resolution of the above paradoxes.

New experiment on magneton and the structure of electron

In the past few months, we got in contact with a wonderful experimenters team from Greece, led by Emmanouil Markoulakis. They have published a number of wonderful experiment results, confirming that the structure of electron is deeply related to Kelvin-Helmholtz vortex theory, just as we described earlier this year [6]. For Markoulakis and team's recent paper, see [4].

In a recent communication, we discuss more on this topic, as follows:

Relativity is irrelevant to anything physical. It has no business saying anything about an electron, or anything else physical.

Electron internal spin is superluminal. This is a known fact that has been subjected to relativistic dogma for 25 years. The relativistic dogma of the church of Einstein wants to limit internal spin velocity of the electron to "c".

The internal spin velocity of the electron is way faster than light speed, based on experimental results and instrumented observations. This is reflected in our paper regarding the KH vortex model of the electron/positron.[6]

The artwork provided below is a bi-polar system, which could be a model of the magnetic moment of an electron or a positron. It is not a model of electron charge. The magnetic field of the electron cannot exist without electron spin and internally rotating charge, according to the consensus view on this topic.

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Electrons are not bi-polar in terms of **charge**, even though they produce a magnetic moment, thought to be caused by electrically charged particle spin.

At the most fundamental level, E and B are mutually causational. Each causes the other. This is well known in plasma physics.

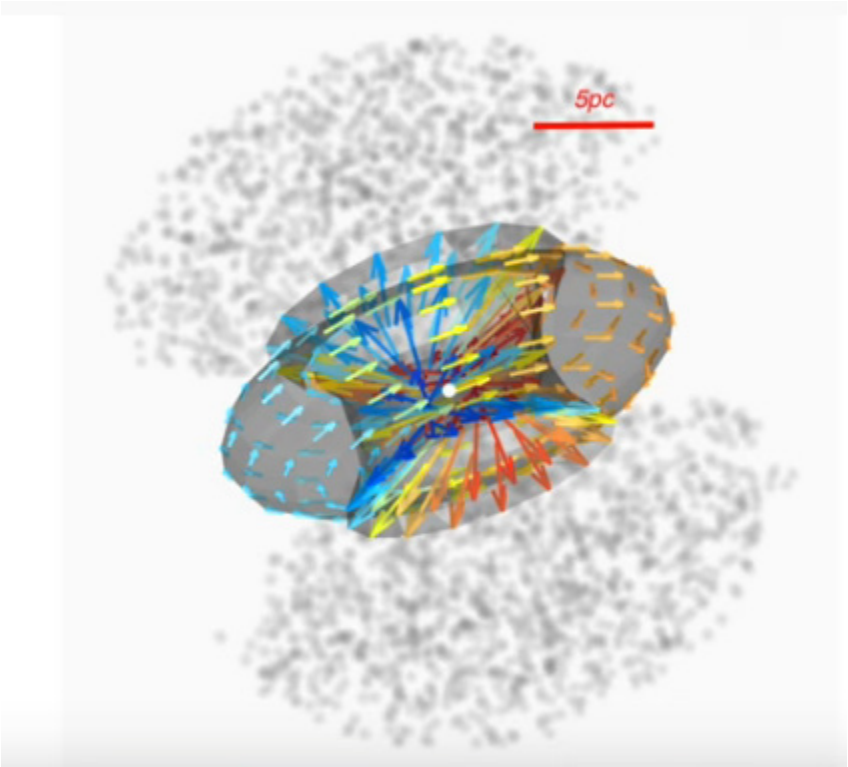

Figure 1. Generation of electric charge of the electron (After Markoulakis)

That looks like the generation of the electric charge of the electron due the horizontally radially spinning magnetosphere.

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Vortexing, vertical spiraling magnetic flux on the its poles creates it magnetic moment and magnetic field whereas its radially horizontally spinning around its equator magnetic flux creates its electric charge and electric field.

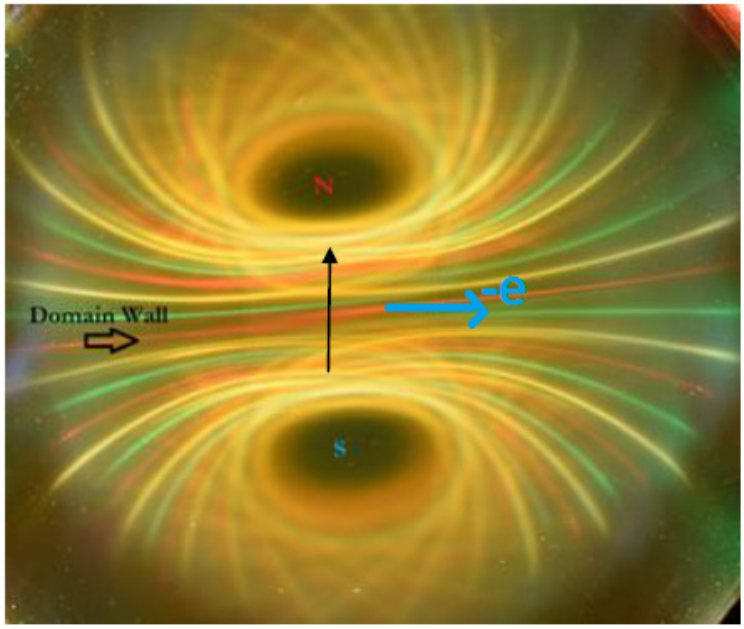

Figure 2. Domain wall inside the electron (After Markoulakis)

Here is its wave function (2D image) of the concentric zero curl, parallel rings of spinning magnetic flux produced responsible for creating its electric charge. Of course due relativistic spin velocity involved and smearing effect the electric charge is uniformly distributed on the electron's sphere:

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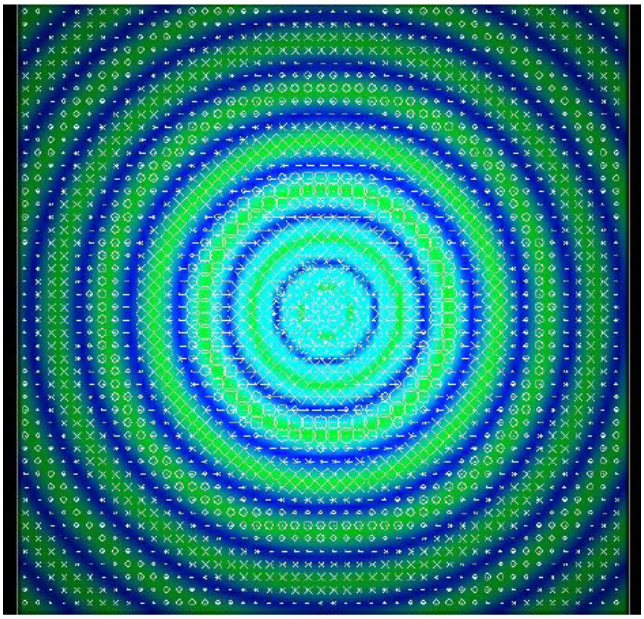

The electron wave function from the side (the spin axis is vertical).

Figure 3. The electron wave function from the side (After Markoulakis)

Concluding remarks

Multiexperimental findings assessment allows one to verify conjectures by two of us (FS & RNB), namely: Smarandache Hypothesis, Smarandache Quantum Sorites Paradoxes and SubQuantum Kinetic Model of Electron. Experimental results discussed here will likely open new directions of research toward evidence-based physics.

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